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EDITOR'S NOTE

This English translation has not been published in printed form/Cette traduction anglaise n'a pas été publiée sous forme imprimée.

- 1 This special report on the boundaries between disciplines is the result of comparing and contrasting a number of articles produced by researchers who are members of the *Questions de Communication* team, each of which raises issues that are worth pursuing. One refers to a conference held in 2001, organised by the Henri-Poincaré Archives and the Information, Communication and Propaganda Research Group (Hert, Nabonnant, Paul-Cavallier, 2003), another is a consideration set out by Jacques Walter (1997). The conference brought together a number of historians and science sociologists who, to varying degrees, had drawn attention to the idea that certain boundaries (between disciplines, between nations, etc) could mask many others, depending on the viewpoint adopted, the context under consideration, and the preference given to either a synchronic or diachronic approach. During the discussions it became apparent that, in order to reach beyond the fact of the considerable heterogeneity of the cases under consideration, it was necessary to analyse the role and the place of boundaries in the construction of objects, the forms of collaboration which could be constructed around these objects, and the manner of broaching the disciplines and the relationship with the researchers' collectives.
- 2 The other work which deals with these boundaries is provided by the study by Jacques Walter (1997) on corporate solidarity patronage, in which the notion is used to analyse what happens when different groups, professional models or skills are obliged to cohabit within the same "new social space". Taking sustenance from field theory, the sociology of social worlds and the sociology of competence, this notion enables the author to

understand both what is at stake as well as the tensions and risks which arise from the meeting between not only universes but also methods and the “points of passage” which characterise the shifting and/or stabilisation of boundaries. If this appears to be pertinent in approaching a social context marked by “the concomitance of phenomena of ‘discontinuity’, and also for seeking ‘cohesion’” (1997 : 14), it is because it contains a “polemological and territorial dimension, derived from the history of the word, and [from] the framework of movements to establish and cross boundaries” (ibid.). Referring to the vagueness which characterises the use of the notion in the social sciences, Jacques Walter borrows definitions from the fields of history and geography which are capable of permitting conceptualisation and operationalisation. While he also broaches the concept of boundary with regard to the specific field represented by patronage, the problematisation he effects is more broadly the result of questioning on the role of boundaries in the sciences.

- 3 It is this relationship between disciplines and boundaries which appeared worth analysing in a period of the history of sciences when the idea of interdisciplinarity seems a commonplace. From this special report on the communicational processes which emerge at the intersection of several disciplines (sociology, information and communication sciences, history, mathematics, etc), it appears that reaching beyond boundaries is not self-evident, even though it is both productive and specifically called for. The importance of the structuring of disciplines and cultural factors remains significant in both individual and collective actions. To appreciate their complexity, the authors have adopted three different angles. The first considers a boundary as a route or as a living narrative, the second starts out from a specific research object, and the third is based on the procedures at work within the framework of a discipline.

Boundaries and personal action – the researcher’s involvement

- 4 For Jacques Walter, Sonia Livingstone and Suzanne de Cheveigné, talking about boundaries in sciences is part of an auto-reflective action that is close to an autobiographical narrative, and is indeed designated as such by Suzanne de Cheveigné. While she and Jacques Walter propose thoughts of a theoretical and methodological nature, Sonia Livingstone, for her part, according to her individual involvement in her research, analyses collaborative research practices. For the first two, the starting point is a specific scientific journey, while for the third it is a matter of analysing meeting methods which characterise the work being carried out by teams of researchers of different nationalities. For all three, the notion of “boundary” is an experience in which the presentation of certain lineaments seems in many respects to be emblematic of the questions raised in the social sciences.
- 5 Suzanne de Cheveigné deals head-on with the relationship that disciplines may have among themselves by referring to the transition she herself experienced in passing from one scientific sector to another. After spending eighteen years as an active physicist, she is currently a sociologist with an interest in representations of science. Fully assuming her autobiographical narrative, her aim is to “highlight what her career has enabled [her] to accumulate, the contrasts which [she] has perceived, and also what it has cost [her]”. To do so, she presents some of the specific features of her research carried out in the two

disciplines. For example, the practice of physics follows a different scheme of operation from that of the social sciences, in terms of both everyday organisation of research and the relationship that the disciplines – “hard sciences” – maintain. On one hand, the collective aspect is an essential feature, as researchers work in laboratories where they mix with a variety of categories of personnel. On the other, the study of certain phenomena requires physicists to collaborate “with chemists, biologists, geologists, and even economists”. Suzanne de Cheveigné suggests that the field of communication experienced a similar situation when researchers in a variety of disciplines came together around a category of common objects, and each contributed the competences and demands of his/her own discipline. This enrichment was lost when the sector was institutionalised by the creation of a section at the National Universities Council. The experience acquired by the author in physics, based on a pooling of knowledge, leads her to discuss the notion of interdisciplinarity claimed by the information and communication sciences. She believes the reports of convergence are insufficient: “Analogy needs to be investigated more deeply, and the strong points of each discipline pooled”. She therefore concludes that there are three possible types of interdisciplinarity, each of which corresponds to an element in her career: “the interdisciplinarity of a number of specialisations around a common object”, “interdisciplinarity through shared action”, and “interdisciplinarity by crossing boundaries”.

- 6 For his part, Jacques Walter presents the idea of crossing boundaries. He also takes as his starting point the work he has been carrying out for a number of years on historical personal accounts of the Shoah and using various media (audiovisual documents, photographs, written press, etc) to highlight “‘cut-and-stitch’ phenomena in scientific activities”. On this point, he posits the need to cross the boundaries between disciplines and proposes a theorisation of the framework which enables him to sketch out the foundations of a research programme. This intellectual approach is based on the strong involvement on the part of the author who, like Sonia Livingstone and Suzanne de Cheveigné, is totally committed to the heuristic approach to boundaries. Life journey and scientific trajectory are closely interconnected in this approach: while Jacques Walter’s work on witness and memory of the attempted extermination of the Jews draws sustenance from the significant importance of biography in his work, the same may also be said of the fields he first broached. The study of corporate patronage has familiarised him with theory and methodology tools whose pertinence he tests on other objects. Thus he compares and contrasts the study of memory representations and the study of evidential construction processes, referring to various traditions and disciplines (interactionism, socio-semiotics, sociology, history) and examining their “yield” for his own work. The author warns against any form of reductionism – which his own presentation does not manage to escape – and has no hesitation in presenting the difficulties encountered in the studies he has carried out, particularly when these involve articulating “history and memory, the individual and the group, text and context”.
- 7 Sonia Livingstone broaches a different aspect of this articulation, addressing international research on the media, communication and cultural phenomena. Suggesting that it has become unthinkable to restrict these studies to exclusively national phenomena, she wonders nevertheless about the nature of the objectives underpinning projects involving comparison and presents several problems they raise. To do so, she chooses to return to her personal experience of collaborative work (comparison of *soap operas* across Europe, comparison of the criminal media and their publics in a historical

perspective, comparison of media usage among children and adolescents across Europe) in order to bring out the theoretical principles involved, the idea – inspired by Oyen (1990) – being that this research is “particularly sensitive to the demands and risks of research in general”. Her point of view is original and reaches beyond considerations of a cultural nature, although the presence of such considerations is noted in the structuring, writing and formalisation in her research. Thus she explains that a major difficulty facing international research lies in the constant transgression of the limits between the professional and private spheres. Because they spend time together, researchers maintain friendly relations that are based more particularly on the need to maintain the links between them in order to be able to complete a project successfully. At another level, she claims that the participation of one or other country is not guided solely by theoretical choices. Apart from the political, practical and strategic factors which may intervene, chance meetings between researchers may also play a part, requiring an a posteriori justification of the choices made. Like Jacques Walter and Suzanne de Cheveigné, Sonia Livingstone draws general conclusions from her personal observations. Extending Hofstede’s metaphor (1998) on the difficulty in comparing apples and oranges, she develops what could be the pros and cons of a contrastive approach. Her opinion is clear – it is vital to define a priori the objective of the comparison.

The boundary considered from the starting point of an object

- 8 While Jacques Walter suggests that using the notion of boundaries in the social sciences may appear to be abusive, he nevertheless takes the notion seriously and adopts the distinction geographers use in their work in determining a boundary as both an obstacle and a place of contact. Applied to the study of memory activities by members of society, this perspective enables him to appreciate the “switch” role the boundary plays in the management of interactions. With regard to the study of the Shoah, this role operates at a number of different levels: for example, cut-off phenomena are evident between evidential productions and the work of historians. Indeed if researchers claim to be the origin of the idea of “stitching” disciplines, it is because it is impossible to dissociate the component parts of the activity and the memory productions calling for a methodology associating a number of different contributions. By bringing into play a framework theory to produce the fabrication and analysis of eye-witness accounts, Jacques Walter refines what he designates as being the trans-boundary character of such an ambition. He constructs his theoretical model by incorporating the achievements of a current of research on the framework which goes beyond the work of Halbwachs (1925) and Goffman (1991), and that of the historians of the Shoah, sociologists of expertise, and socio-semioticians. This leads him to describe an imbrication of three levels of framework in the case of testimonial configurations: a macro-level corresponding to historical factors, a meso-level incorporating polemic, and a micro-level concerning media-related arrangements.
- 9 So is the crossing of a boundary not determined by the invested object alone? No, according to Jacques Walter, Philippe Chavot and Anne Masseran. While the contributions of these authors deal with a boundary object – the media-related eye-witness accounts of the Shoah for some, and genetically modified objects (GMOs) for others – and call on the work of Star and Griesemer (1989), they go beyond an analysis of the actual object itself in

order to propose a theorisation of boundaries. Boundaries are considered in two ways – the object studied and the theoretical tools involved – which are by no means exclusively dependent on each other. If it is helpful to integrate a number of currents of disciplines when thinking about a boundary object, as these two illustrations indicate, this does not concern this type of research alone, although its presentation makes it possible to appreciate its relevance.

Communicational processes and the construction of boundaries

- 10 The boundary object makes it possible to understand how the different social fields are connected among themselves. Interpretation frameworks may coexist, and boundaries are tending to become blurred. Nevertheless, in a situation where the legitimacy of the usual scientific players may fall short, it is important to understand how boundaries are being called on once more to play their roles, and the frameworks for interaction are bound to be redefined. In their contribution, Anne Masseran and Philippe Chavot analyse the work of boundaries as a cartographic work (taking up the work of Gieryn, 1983, 1999). Thus we pass from an analysis of the framework by Jacques Walter to the analysis of a map, involving metaphorical boundaries. The authors show that, in the controversy surrounding GMOs, the framework of the debates, the way in which these are displaced and repositioned on the rhetorical map of the debates, and the very constitution of the map, are the result of alliances between the various categories of players. The boundary designated here is the boundary between science and society ; it manifests itself in work involving the successive re-framing of the object in question (GMOs) according to context and the players concerned (scientists, industrial farmers, traditional farmers, consumers, associations, citizen scientists, etc) in order to trace out the limits of each party's area of intervention and to indicate the legitimate contact persons. The televised staging of the controversy is part of this broader process of attributing causes and legitimacies in order to take action. In this sense, the boundary has no existence of itself : it is the result of interactions (Star, Griesemer, 1989) and the effects of mobilisations and alliances (Callon, 1986) among players seeking to position themselves on the "right" side of the boundary (the side of science and reason). It is therefore the result of an ongoing communicational process.
- 11 Muriel Lefebvre and David Pontille also analyse the boundary using this process : sociological or mathematical writing is questioned from the viewpoint of constituting a collective of researchers. The format is conventional, and not only delimits what constitutes common meaning for the group, but also, in the case of sociology presented by David Pontille, what makes it possible to define the authenticity of both the statement (particularly in the hermeneutic approaches) and the formulation (in the descriptive approaches). If, as this last author explains, the authenticity expressed by formulating the written word is a necessary criterion of belonging to the scientific collective, we can see the value of analysing precisely the mechanisms of scriptural arrangements as producers of differentiations between authentic formulations bearing an assertive legitimacy and formulations that are not identified as being scientific. The distinction produced in this way makes it possible both to construct the boundary between science and non-science and to constitute a conventional marker identifying the social universe of the sciences.

- 12 Another difference, picked up by Muriel Lefebvre, manifests itself in the written production of the sciences at the level of the role and the place of images in mathematics. The author does not refer directly to the legitimacy of the formulations, but rather to the maintenance of a separation between a formal context of the circulation of stabilised and validated scientific formulations, and an informal context of producing these formulations, where the conventional cognitive and social boundaries must sometimes be exceeded. This distinction refers to two conceptions of the community : understood on the basis of a social shared meaning, in a formalised framework, and on the basis of a corpus of established knowledge, or on the contrary on the basis of a set of contextualised practices. In this last case the boundary takes the form of a resource that can be mobilised in a formal context involving reference to the community of mathematicians, but it could be exceeded in order to constitute “a community of actual local practices, or equally an epistemic community in the local relationship it establishes with its objects”. This is the analysis of a “cut-and-stitch” phenomenon close to that reported by Jacques Walter in his contribution.
- 13 The work of boundaries is illustrated in the light of the processes for establishing markers ; these are conventional in David Pontille’s work and informal and internal to the community in Muriel Lefebvre’s. This social and communicational process, based on inscriptive arrangements, gives the collectives legitimacy and substance, either when compared with other collectives, or when compared with other forms of formulations, or again when compared with other concurrent forms of knowledge, as in the case of GMOs. Through these cases, or through the research processes presented above, which demonstrate the difficulties and limits of crossing the boundaries between disciplines, it appears that the boundary is defined above all on the basis of its context – whatever the route taken, the object considered by the researcher, or the communication process that a collective uses – and that it produces or is produced by formatting. In other words, the boundary is not a statement of fact on the basis of which a situation may be analysed, but rather it indicates a place of tension which both provides structure in terms of disciplines, objects and practices, and is necessary in the work of researchers between the levels of apprehending objects and between actual collaborative practices. Boundaries appear at the local, institutional, individual and collective levels. They are particularly significant places in terms of what defines a research activity. By articulating three levels of the boundary and as many approaches, the contributions in this special report represent valuable routes for analysis in order to be able to understand, in research, the “cut-and-stitch” phenomena as applied to disciplines.

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